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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,320	04/13/2004	Chc-Hsiung Hsu	UC0422USNA	4493

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WILMINGTON, DE 19805

EXAMINER

THOMAS, JAISON P

ART UNIT	PAPER NUMBER
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1751

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/823,320	Applicant(s) HSU ET AL.	
	Examiner Jaison P. Thomas	Art Unit 1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 9-18 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 10 and 11 is/are allowed.
- 6) ☒ Claim(s) 1-3, 9 and 12-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1,2,9 and 10 are amended. Claims 4 and 5 are withdrawn as being drawn to nonelected species.
2. The rejections of Claims 1-3,6-9 and 12-18 under 35 USC 102(b) as being anticipated by Han et al. (US Patent 5185100) are withdrawn in view of applicant's amendments.
3. The rejections of Claims 1-3,6-9 and 15-17 under 35 USC 102(b) as being anticipated by JP 62-119237 are withdrawn in view of applicant's amendments.
4. The rejections of Claims 15-18 under 35 USC 103(a) as being unpatentable over Han et al. (US Patent 5185100) are withdrawn in view of applicant's amendments.
5. Claims 10 and 11 remain allowable over the prior art of record.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Masahiro (JP 2003-040856).

Masahiro teaches a dopant compound comprised of a m-fluorobenzenesulfonic acid derivative wherein the one of the substituents on the benzene ring is a carboxyamido group (Abstract) which Examiner construes as equivalent to a

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"fluoroamido organic acid" as required by instant Claim 1. Masahiro teaches the use of this dopant in conjunction with the polymerization of aniline, pyrrole and thiophene (pg. 4, Formulae [3], [4] and [5]) and substituted versions of the monomer (e.g. R9 and R10 in the thiophene formula [4] can be alkyl or alkoxy groups containing 1-20 carbon atoms, see pg.4, para. 0022). Masahiro teaches additional compounds to improve the dispersion of the monomer in the reaction medium (pg. 4, para. 0028). Masahiro also includes suggested uses for doped conductive polymers in electronic devices such as capacitor and cell electrode materials as well as antistatic ingredients (pg. 1, para. 0002 and pg. 5, para. 0031).

With respect to the pH limitations of Claim 2, the Examiner respectfully submits that the prior art would inherently meet the claimed limitations. Specifically, the prior art teaches similar components being used in a similar manner and would inherently possess the pH values claimed.

8. Claims 1-3, 9, and 12-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakama et al. (US Patent 5126017).

"A process for producing an electrically conductive polymer film which comprises electrically polymerizing a monomer, capable upon polymerization of providing conjugated double bonds, in an electrolytic polymerization solution containing a fluorocarbon surfactant and a dopant electrolyte using a working electrode and a counter-electrode immersed in the electrolytic polymerization solution, with the proviso that for an anodic oxidation electrolytic polymerization a fluorocarbon surfactant except

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an anionic fluorocarbon surfactant is used, and for a cathodic reduction electrolytic polymerization a fluorocarbon surfactant except a cationic fluorocarbon surfactant is used." (Abstract). " The fluorocarbon surfactant used in the present invention may be a commercially available fluorocarbon surfactant. Examples thereof include anionic surfactants such as ...nonionic surfactants such as perfluoroalkyl-ethylene oxide adducts, perfluoro(polyoxyethylene ethanol), perfluoroalkylalkoxylates, and fluorinated alkyl esters, ... These surfactants usually have 2 to 20 carbon atoms." (Column 2, lines 65-68 thru Column 3, lines 1-8). "The monomers that can be used for production of the film in this invention are those which can provide conjugated double bonds in the chemical structure of the polymer. Examples of such monomers include pyrrole, thiophene, furan, aniline, benzene, and derivatives thereof. Examples of derivatives of such 5-membered heterocyclic compounds include those which have an alkyl (preferably a straight chain alkyl group (e.g., --C.sub.12 H.sub.24)), alkoxy (e.g., --OC.sub.8 H.sub.17) or acyl (e.g., --COC.sub.7 H.sub.15) group (preferably having 1 to 15 carbon atoms) at the .beta.-position thereof." (Column 3, lines 60-66). Examiner also notes, "it is commonplace in chemistry that acids will react with the common alkali metal hydroxides to form salts, therefore the common salts are said to be unpatentable variants and to be suggested to the chemist by the old acid", see *In re Williams*, 89 USPQ 396. " Examples of solvents which can be used in this invention for dissolving the monomers, the electrolyte and the fluorocarbon surfactant include water, organic solvents such as an alcohol, acetonitrile, nitromethane, nitrobenzene, propylene carbonate, tetrahydrofuran, dimethylformamide, and the like, and mixed solvents

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composed of water and these organic solvents. The solvent should not be those which dissolve the polymer produced." (Column 4, lines 39-47). " According to the present invention, an electrically conductive polymer film free from surface defects can be easily produced by electrolytic polymerization. The thus-produced electrically conductive polymer film is peeled from the working electrode. The film is washed and dried (which may be conducted under a reduced pressure). The film obtained can be used in applications such as battery electrodes, capacitors, electrically conductive films, heating elements, and the like. The film produced on an electrode may also be used without peeling from the electrode. After washing and drying the film with the electrode can be used as an active material of a secondary battery." (Column 5, lines 51-63).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masahiro (JP 2003-040856).

Masahiro is relied upon as disclosed above. However, Masahiro does not teach a specific layer embodiment of the composition nor devices made using this layer configuration as required by instant claims 15-17 or a thin film transistor as required by instant claim 18.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make a layer of the conductive composition and devices from the composition of Masahiro since Masahiro already teaches the possibility of using the said composition to make electronic devices including devices containing electrodes which would require forming a layer of the Masahiro conductive composition.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make a thin film transistor out of the composition of Masahiro since Masahiro already suggests using the composition in electrode applications.

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakama et al. (US Patent 5126017).

Nakama is relied upon as disclosed above. However, Nakama does not teach thin film field effect transistor as required by instant Claim 18.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare a thin-film transistor since Nakama teaches the possibility of making different electrode containing electronic devices from the composition disclosed in Nakama.

Conclusion

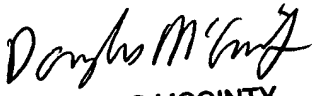
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison P. Thomas whose telephone number is (571) 272-8917. The examiner can normally be reached on Mon-Fri 8:30 am to 5:00 pm.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jaison Thomas
Examiner
3/31/2007

JT


DOUGLAS MCGINTY
SUPERVISORY PATENT EXAMINER
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